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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/613,433	07/03/2003	Leonel Yanez Martinez	MX/JFC-Serv-001	5111
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Carmen Pili Ekstrom			MAYO III, WILLIAM H	
727 Sunshine I Los Altos, CA	· - ·		ART UNIT	PAPER NUMBER
2007.1100, 077 97027			2831	
		DATE MAIL ED: 12/16/2004		

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)				
	10/613,433	MARTINEZ ET AL.				
Office Action Summary	Examiner	Art Unit				
	William H. Mayo III	2831				
The MAILING DATE of this communication appears on the cover sheet with the correspondence address Period for Reply						
A SHORTENED STATUTORY PERIOD FOR REPLY THE MAILING DATE OF THIS COMMUNICATION. - Extensions of time may be available under the provisions of 37 CFR 1.13 after SIX (6) MONTHS from the mailing date of this communication. - If the period for reply specified above is less than thirty (30) days, a reply if NO period for reply is specified above, the maximum statutory period who reallure to reply within the set or extended period for reply will, by statute, Any reply received by the Office later than three months after the mailing earned patent term adjustment. See 37 CFR 1.704(b).	i6(a). In no event, however, may a reply be time within the statutory minimum of thirty (30) days ill apply and will expire SIX (6) MONTHS from cause the application to become ABANDONEI	nely filed s will be considered timely. the mailing date of this communication. O (35 U.S.C. § 133).				
Status						
1) Responsive to communication(s) filed on	_•					
	action is non-final.	·				
3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under <i>Ex parte Quayle</i> , 1935 C.D. 11, 453 O.G. 213.						
Disposition of Claims						
 4) Claim(s) 11-40 is/are pending in the application. 4a) Of the above claim(s) 28-40 is/are withdrawn from consideration. 5) Claim(s) is/are allowed. 6) Claim(s) 11-27 is/are rejected. 7) Claim(s) is/are objected to. 8) Claim(s) are subject to restriction and/or election requirement. 						
Application Papers						
9) The specification is objected to by the Examiner 10) The drawing(s) filed on 03 July 2003 is/are: a) Applicant may not request that any objection to the of Replacement drawing sheet(s) including the correction of the oath or declaration is objected to by the Examiner	\square accepted or b) \boxtimes objected to be drawing(s) be held in abeyance. See on is required if the drawing(s) is obj	e 37 CFR 1.85(a). ected to. See 37 CFR 1.121(d).				
Priority under 35 U.S.C. § 119	•					
12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) All b) Some * c) None of: 1. Certified copies of the priority documents have been received. 2. Certified copies of the priority documents have been received in Application No 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)). * See the attached detailed Office action for a list of the certified copies not received.						
Attachment(s) 1) Notice of References Cited (PTO-892) 2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date	4) Interview Summary Paper No(s)/Mail Da 5) Notice of Informal Pa					

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DETAILED ACTION

Election/Restrictions

- 1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - Claims 11-27 are drawn to coaxial cable, which is classified in class 174, subclass 102R.
 - II. Claims 28-40 are drawn to method of making a coaxial cable, which is classified in class 29, subclass 825+.

The inventions are distinct, each from the other because of the following reasons:

- 2. Inventions II and I are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case, the second polymer layer may be made by injection molding, spraying, or casting, rather than extrusion molding.
- 3. Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, restriction for examination purposes as indicated is proper.
- 4. During a telephone conversation with Carmen Ekstrom on 12/10/04, a provisional election was made with traverse to prosecute the invention of Group I, claims 11-27. Affirmation of this election must be made by applicant in replying to this Office action.

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Claims 28-40 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Priority

6. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in present Application No. 10/613,433, filed on July 3, 2003.

Drawings

7. The drawings are objected to because Figures 1-2 lacks the proper cross-hatching, which indicates the type of materials, which may be in an invention.

Specifically, the cross hatching to indicate the conductor and insulation materials is improper. The applicant should refer to MPEP Section 608.02 for the proper cross-hatching of materials. Correction is required.

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Specification

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or

REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)

- (e) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (f) BRIEF SUMMARY OF THE INVENTION.
- (g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (h) DETAILED DESCRIPTION OF THE INVENTION.
- (i) CLAIM OR CLAIMS (commencing on a separate sheet).
- (j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Content of Specification

(a) <u>Title of the Invention</u>: See 37 CFR 1.72(a) and MPEP § 606. The title of the invention should be placed at the top of the first page of the specification unless the title is provided in an application data sheet. The

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title of the invention should be brief but technically accurate and descriptive, preferably from two to seven words may not contain more than 500 characters.

- (b) <u>Cross-References to Related Applications</u>: See 37 CFR 1.78 and MPEP § 201.11.
- (c) <u>Statement Regarding Federally Sponsored Research and Development:</u> See MPEP § 310.
- (d) Incorporation-By-Reference Of Material Submitted On a Compact Disc:
 The specification is required to include an incorporation-by-reference of electronic documents that are to become part of the permanent United States Patent and Trademark Office records in the file of a patent application. See 37 CFR 1.52(e) and MPEP § 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text were permitted as electronic documents on compact discs beginning on September 8, 2000.

Or alternatively, Reference to a "Microfiche Appendix": See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.

- (e) <u>Background of the Invention</u>: See MPEP § 608.01(c). The specification should set forth the Background of the Invention in two parts:
 - (1) Field of the Invention: A statement of the field of art to which the invention pertains. This statement may include a paraphrasing of the applicable U.S. patent classification definitions of the subject matter of the claimed invention. This item may also be titled "Technical Field."
 - (2) Description of the Related Art including information disclosed under 37 CFR 1.97 and 37 CFR 1.98: A description of the related art known to the applicant and including, if applicable, references to specific related art and problems involved in the prior art which are solved by the applicant's invention. This item may also be titled "Background Art."
- (f) <u>Brief Summary of the Invention</u>: See MPEP § 608.01(d). A brief summary or general statement of the invention as set forth in 37 CFR 1.73. The summary is separate and distinct from the abstract and is directed toward the invention rather than the disclosure as a whole. The summary may point out the advantages of the invention or how it solves problems

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previously existent in the prior art (and preferably indicated in the Background of the Invention). In chemical cases it should point out in general terms the utility of the invention. If possible, the nature and gist of the invention or the inventive concept should be set forth. Objects of the invention should be treated briefly and only to the extent that they contribute to an understanding of the invention.

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- (g) <u>Brief Description of the Several Views of the Drawing(s)</u>: See MPEP § 608.01(f). A reference to and brief description of the drawing(s) as set forth in 37 CFR 1.74.
- (h) Detailed Description of the Invention: See MPEP § 608.01(g). A description of the preferred embodiment(s) of the invention as required in 37 CFR 1.71. The description should be as short and specific as is necessary to describe the invention adequately and accurately. Where elements or groups of elements, compounds, and processes, which are conventional and generally widely known in the field of the invention described and their exact nature or type is not necessary for an understanding and use of the invention by a person skilled in the art, they should not be described in detail. However, where particularly complicated subject matter is involved or where the elements, compounds, or processes may not be commonly or widely known in the field, the specification should refer to another patent or readily available publication which adequately describes the subject matter.
- (i) Claim or Claims: See 37 CFR 1.75 and MPEP § 608.01(m). The claim or claims must commence on separate sheet or electronic page (37 CFR 1.52(b)(3)). Where a claim sets forth a plurality of elements or steps, each element or step of the claim should be separated by a line indentation. There may be plural indentations to further segregate subcombinations or related steps. See 37 CFR 1.75 and MPEP § 608.01(i)-(p).
- (j) Abstract of the Disclosure: See MPEP § 608.01(f). A brief narrative of the disclosure as a whole in a single paragraph of 150 words or less commencing on a separate sheet following the claims. In an international application which has entered the national stage (37 CFR 1.491(b)), the applicant need not submit an abstract commencing on a separate sheet if an abstract was published with the international application under PCT Article 21. The abstract that appears on the cover page of the pamphlet published by the International Bureau (IB) of the World Intellectual Property Organization (WIPO) is the abstract that will be used by the USPTO. See MPEP § 1893.03(e).
- (k) <u>Sequence Listing.</u> See 37 CFR 1.821-1.825 and MPEP §§ 2421-2431. The requirement for a sequence listing applies to all sequences disclosed

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in a given application, whether the sequences are claimed or not. See MPEP § 2421.02.

8. The disclosure is objected to because of the following informalities: The specification lacks the proper headings and content as disclosed above. Specifically, the <u>Brief Summary of the Invention</u> heading and content body is missing and the heading <u>Detailed Description of the Invention</u> is also missing. The applicant should insert the proper headings to provide clarity to the specification.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

- 9. The following is a quotation of the second paragraph of 35 U.S.C. 112:
 The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
- 10. Claims 11-27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
- 11. Claim 1 recites the limitation "the conductor" in line 6, which is confusing and renders the claim indefinite. It is unclear whether the applicant is referring to the previous mentioned "core conductor element" or introducing a new conductor. If the applicant is referring to the previous mentioned term, then he/she should recite the term with consistency. If the applicant is referring to a new conductor, then he/she should make the term more distinguishable.

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12. Claim 21 recites the limitation "the second reinforcement layer" in line 2. There is insufficient antecedent basis for this limitation in the claim because there has not been any previous reference to a second reinforcement layer in previous lines of the claims.

13. Claim 21 recites the limitation "the swellable dielectric element" in line 3. There is insufficient antecedent basis for this limitation in the claim because there has not been any previous reference to an swellable dielectric element in previous lines of the claims.

Claim Rejections - 35 USC § 103

- 14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
 - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- 15. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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16. Claims 11-13, 16-18, 20, and 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chan et al (Pat Num 5,486,648, herein referred to as Chan) in view of Goehlich (Pat Num 6,784,371). Chan discloses a dry water resistant coaxial cable (Figs 1-8), which provides improved protection against the migration of water (Col 1, lines 5-16). With respect to claim 11, Chan discloses a cable (Fig 3) comprising a metal core conductor element (1), a dielectric element (2-4) around the core conductor (1) which is based on three layers, comprising a first layer (2) comprising a polymer mixed with an adhesive component and applied to the conductor (1) as an uniform layer (Col 5, lines 17-26), a second layer (3) comprising a cellular expansion polymer (i.e. XLPE) on the first layer (2, Col 5, lines 15-25), and a third layer (4) comprising a reinforcement layer on the second layer (3, Col 5, lines 15-25), a second external conductor (6) surrounding the dielectric element (6), a second conductor element (5a) on the second external conductor (6) comprising a water penetration protective element (i.e. swellable yarn) and a protective element (7) surrounding the second conductor element (5a, Col 5, lines 36-46). With respect to claim 12, Chan disclose that the metal core conductor (1) may be made of copper or aluminum (Col 5, lines 11-13). With respect to claim 13. Chan discloses that the first layer and the third layer (2 & 4) may comprise a material such as (i.e. XLPE, low density polyethylene, Col 4, lines 19-25), wherein the layers are thin, continuous and homogeneous (Col 4, lines 19-25). With respect to claim 16, Chan discloses that the second external conductor (6) may be made of copper and aluminum (Col 5, lines 28-30). With respect to claim 17, Chan discloses that the water penetration protective element (5a) may a water swellable fibers, such as polyester (Col 3, lines 64-

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protective cover (7) has an outside diameter (Fig 2).

67). With respect to claim 18, Chan discloses that the protective cover (7) may be made of low and medium density polyethyelene (Col 5, lines 36-40). With respect to claim 23, Chan discloses that the water penetration protective element (5a) may comprise a swellable tape (5d as shown in Fig 8), which is helically wound on the second conductor (6, Fig 8). With respect to claim 24, Chan discloses that the water penetration protective element (5a) has an absorption speed (Col 4, lines 14-18). With respect to claim 25, Chan discloses that the protective cover (7) may be a medium density polyethylene (i.e. polyethylene is black in color, Col 5, lines 36-40), wherein the

However, Chan doesn't necessarily disclose the first layer comprising an adhesive (claim 11), nor the adhesive being selected from the group consisting of vinyl adhesive, acrylic adhesive, and combination thereof (claim 13), nor the adhesive being selected from the group consisting of ethylene acrylate acid, ethylene vinyl acid, and combinations thereof (claim 20), nor the absorption speed being 15ml/g per minute and absorption capacity of more than 30ml/g (claim 24).

Goehlich teaches a cable (Figs 1-4) comprising a cable core being surrounded by a plurality of insulating layers which overcomes the shortcoming of the prior art cables by preventing water intrusion resulting from a damage outer sheath to travel longitudinally thereby eliminating the possibility of the internal components (Col 1, lines 1-6 & 28-37). Specifically, with respect to claim 11, Goehlich teaches a cable (Fig 1) comprising a cable core (1), which is surrounded by a plurality of insulation layers (5a & 5b), wherein the insulation layers (5a & 5b) are formed as thin film layers (Col 7, lines

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22-34), and comprise an adhesive component (Col 5, lines 8-20). With respect to claims 13 & 20, Goehlich teaches that the adhesive component may be selected from ethylene acrylate acid (Col 5, lines 8-20).

With respect to claims 11, 13, & 20, it would have been obvious to one having ordinary skill in the art of cables at the time the invention was made to modify the insulation layers of Chan to comprise the adhesive component configuration as taught by Goehlich because Goehlich teaches that such a configuration overcomes the shortcoming of the prior art cables by preventing water intrusion resulting from a damage outer sheath to travel longitudinally thereby eliminating the possibility of the internal components (Col 1, lines 1-6 & 28-37).

With respect to claim 24, it would have been obvious to one having ordinary skill in the art at the time the invention was made to the cable of modified Chan to comprise the absorption speed being 15ml/g per minute and absorption capacity of more than 30ml/g, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller, 105 USPQ 233.*

17. Claims 14-15, 19, 21-22, and 26-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chan (Pat Num 5,486,648) in view of Goehlich (Pat Num 6,784,371, herein referred to as modified Chan), as applied to claims 11 & 18 above, further in view of Belli et al (Pat Num 6,455,769, herein referred to as Belli). Modified Chan discloses a dry water resistant coaxial cable (Figs 1-8, see Chan reference), which provides improved protection against the migration of water (Col 1, lines 5-16). Specifically, with

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respect to claim 14, modified Chan discloses that the second layer (3) may be made of low density polyethylene. With respect to claim 21, modified Chan discloses that the second conductor element (3) is applied onto the core conductor (1) and is capable of providing a better watertightness to the swellable dielectric element (5a) and superficial appearance (Col 4, lines 19-35). With respect to claim 22, modified Chan discloses that the second external conductor (6) may be made of aluminum or copper (Col 5, lines 28-30).

Modified Chan doesn't necessarily disclose the second layer comprising a swelling agent (claim 14), nor the swelling agent being selected from the group consisting of azodicarbonamide, p-toluene, sulphonyl hydrazide, 5-phynyl tetrazol and combinations, thereof (claim 15), nor the diameter of the second layer being 13.0mm ± 0.10mm (claim 21), nor the outer conductor being a material formed as a cylindrical pipe which can be longitudinally welded, extruded, or the edges overlapped having an external conductor thickness of at least 0.34mm and a diameter of 13.7mm ± 0.10mm (claim 22), nor the diameter of the protective cover being 15.5mm ± 0.10mm with about 0.67mm ± 0.02mm thickness (claim 26), nor the cable comprising an antioxidants (claim 27).

Belli teaches a cable (Fig 1) comprising a cable core which overcomes the shortcomings of the prior art cables by effectively addressing both the problem of avoiding penetration and propagation of moisture and/or water inside the cable core, the problem of possible deformations or breakages of the metallic shield due to cable thermal cycles, while maintaining a proper electrical contact between the metal shield

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and the cable core (Cols 2-3, lines 65-68 & 1-4). Specifically, with respect to claim 14, Belli teaches a cable (Fig 1) comprising a cable core (1), a plurality of insulation layers (2-4), a metallic shielding layer (6) and an outer jacket layer (7), wherein the second insulation layer (3) may contain an expanding agent (Col 7, lines 1-4). With respect to claim 15, Belli teaches that the second insulation layer (3) may comprise a swelling agent which may be azodicarbonamide, or p-toluene, sulphonyl hydrazide (Col 7, lines 5-10). With respect to claim 21, Belli teaches that the diameter of the insulation layers may be 14mm (Col 9, line 54). With respect to claim 22, Belli teaches that the outer conductor (6) may be a material formed as a cylindrical pipe (i.e. metallic tube) which can be longitudinally welded or the edges overlapped Col 4, lines 55-60), wherein the shield (6) may have an external conductor thickness of at least 0.2mm and a diameter of 14.2mm (Col 10, lines 12-15). With respect to claim 26, Belli teaches that the cable (Fig 1) has a diameter (Fig 2). With respect to claim 27, Belli teaches that the insulation layers (2-5) of the cable (Fig 1) may comprise an antioxidant (in Irganox (Col 10, lines 60-65).

With respect to claims 14-15 and 27, it would have been obvious to one having ordinary skill in the art of cables at the time the invention was made to modify the cable of modified Chan to comprise the a swellable agent configuration as taught by Belli because Belli teaches that such a configuration overcomes the shortcomings of the prior art cables by effectively addressing both the problem of avoiding penetration and propagation of moisture and/or water inside the cable core, the problem of possible deformations or breakages of the metallic shield due to cable thermal cycles, while

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maintaining a proper electrical contact between the metal shield and the cable core (Cols 2-3, lines 65-68 & 1-4).

With respect to claims 21-22 & 26, it would have been obvious to one having ordinary skill in the art at the time the invention was made to the cable of modified Chan to comprise the diameter of the second layer to be 13.0mm ± 0.10mm, the outer conductor to have an thickness of at least 0.34mm and a diameter of 13.7mm ± 0.10mm and the protective cover to have an thickness 15.5mm ± 0.10mm with about 0.67mm ± 0.02mm, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller, 105 USPQ 233.*

Conclusion

18. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. They are Uematsu (Pat Num 4,703,134), Marciano-Agostinelli et al (Pat Num 5,010,209), Hughey, Jr. et al (Pat Num 5,043,538), Marin et al (Pat Num 5,281,757), Arroyo (Pat Num 5,082,719), Uematsu (Pat Num 5,300,733), Arroyo et al (Pat Num 5,249,248), Arroyo et al (Pat Num 5,373,100), Garner (Pat Num 3,321,572), Bahder et al (Pat Num 4,145,567), Bahder (Pat Num 4,256,921), all of which disclose water swellable materials being embedded in cables.

Communication

19. Any inquiry concerning this communication or earlier communications from the

examiner should be directed to William H. Mayo III whose telephone number is (571)-

272-1978. The examiner can normally be reached on M-F 8:30am-6:00 pm (alternate

Fridays off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Dean Reichard can be reached on (571) 272-2800 ext 31. The fax phone

number for the organization where this application or proceeding is assigned is 703-

872-9306.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

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For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

William H. Mayo III Primary Examiner Art Unit 2831

WHM III

December 13, 2004